

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A system for providing information regarding the operation of a control system, comprising:

a Web server module associated with said control system, said Web server module having a memory operative to store a non-markup language Web site database that ~~[[may be]]~~ is used to dynamically generate a markup language Web page in response to a request, wherein ~~[[the]]~~ said Web site may be provided page is populated by the Web server module ~~to provide~~ with information regarding the operation of the control system in response to the request; ~~[[and]]~~

a remote computer operative to receive non-markup language configuration data defining attributes of said Web site, to store said configuration data as said non-markup language Web site database, to access said Web server module, to transmit said non-markup language Web site database to said Web server module, and to request and receive said markup language Web page from said Web server module; and

a Web server module configuration application operative to create said non-markup language Web site database and to transmit said database to said Web server module in response to the request.

2. (Currently amended) The system of Claim 1, wherein said Web server module is operative to receive a request for ~~[[a]]~~ said Web page ~~of said Web site~~ and to dynamically generate a markup language Web page from said non-markup language Web site database in response to said request.

3. (Currently amended) The ~~method~~ system of Claim 2, wherein said Web server module is operative to transmit said dynamically generated markup language Web page to ~~[[a]]~~ the remote computer making said request.

4. (Previously presented) The system of Claim 3, wherein said non-markup language Web site database further comprises a security profile map defining security level and privilege information for one or more users, and wherein said Web server module is further operative to identify a user associated with said request and to determine if said user is authorized to receive said Web page based upon an entry in said security profile map associated with said user.

5. (Previously presented) The system of Claim 2, wherein said non-markup language Web site database further comprises data defining a Web page comprising a table for reading or writing the contents of a memory register contained within said control system.

6. (Previously presented) The system of Claim 2, wherein said non-markup language Web site database further comprises data defining a Web page comprising a non-text rendering of read or write data corresponding to contents of a memory register contained within said control system.

7. (Original) The system of Claim 5, wherein said request comprises a request for said Web page comprising a table, and wherein said Web server module is operative to identify said memory register, to determine the contents of said memory register, and to create said Web page comprising a table containing said contents of said memory register.

8. (Original) The system of Claim 6, wherein said request comprises a request for said Web page comprising a non-text rendering, and wherein said Web server module is operative to identify said memory register, to determine the contents of said memory register, and to create said Web page comprising a non-text rendering based upon said contents of said memory register.

9. (Original) The system of Claim 3, wherein said Web server module is electrically connected to said control system controller through a backplane interface.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

10. (Original) The system of Claim 3, wherein said Web server module is electrically connected to said control system controller through a serial interface.

11. (Original) The system of Claim 3, wherein said Web server module is electrically connected to said control system controller through a network interface.

12. (Currently amended) The ~~method~~ system of Claim 3, wherein said request comprises a hyper-text transport protocol request and wherein said request is received from a Web browser executing on said remote computer.

13. (Currently amended) The ~~method~~ system of Claim [[12]] 1, wherein said dynamically generated markup language Web page comprises a Web page identifying an alarm generated by said Web server module through the monitoring of data for said control system.

14. (Currently amended) The ~~method~~ system of Claim [[12]] 1, wherein said dynamically generated markup language Web page comprises a Web page identifying an event generated by said Web server module through the monitoring of data for said control system.

15. (Currently amended) The ~~method~~ system of Claim [[12]] 1, wherein said Web server module further comprises an Ethernet interface for receiving said non-markup language Web site database and said requests and wherein said dynamically generated markup language Web page may comprise a Web page providing information regarding the status of said Ethernet interface.

16. (Currently amended) The ~~method~~ system of Claim [[12]] 1, wherein said Web server module further comprises a serial port interface and wherein said dynamically generated markup language Web page may comprise a Web page providing information regarding said serial port interface.

17. (Currently amended) The ~~method~~ system of Claim [[12]] 1, wherein said dynamically generated markup language Web page comprises a Web page providing system administrator or specific user-allowed access that allows active browser session modification of said security profile privileges.

18. (Currently amended) The ~~method~~ system of Claim [[12]] 1, wherein said Web server module is further operative to receive a plurality of said requests and wherein said dynamically generated markup language Web page may comprise a Web page identifying a like plurality of users connected to said Web server module and associated with said plurality of requests.

19. (Currently amended) An apparatus for providing information regarding the operation of a control system, comprising:

a central processing unit;

a memory coupled to said central processing unit operative to store a non-markup language Web site database defining attributes of a Web site associated with said control system, said non-markup language Web site database in a format that ~~[[may be]]~~ is utilized by said central processing unit to dynamically render Web pages of said Web site;

a first interface coupled to said central processing unit for communicating with said control system controller and utilized by said central processing unit to retrieve and provide information regarding the operating of and for said control system ~~that may be provided~~ through the dynamically generated Web site;

a second interface ~~for communicating with a remote computer~~ also coupled to said central processing unit and utilized by said central processing unit to receive requests for said Web pages and to transmit responses to said requests; and

a computer operative to store a Web server module configuration application utilized by a user to create said non-markup language Web site database and to communicate with said central

processing unit via said second interface by sending said requests and receiving said transmitted responses.

20. (Previously presented) The apparatus of Claim 19, wherein said central processing unit is further operative to receive a request via said second interface for a Web page, to dynamically generate said Web page from said non-markup language Web site database utilizing information obtained from said control system controller via said first interface, and to transmit said Web page in response to said request via said second interface.

21. (Original) The apparatus of Claim 20, wherein said first interface comprises a backplane interface.

22. (Original) The apparatus of Claim 20, wherein said first interface comprises a serial port interface.

23. (Original) The apparatus of Claim 20, wherein said first interface comprises a network interface.

24. (Original) The apparatus of Claim 20, further comprising a security profile map defining security privileges for one or more users, and wherein said central processing unit is further operative to identify a user associated with said request and to determine if said user is authorized to receive said Web page based upon entries in said security profile map associated with said user and said Web page.

25. (Previously presented) The apparatus of Claim 20, wherein said non-markup language Web site database further comprises data defining a Web page comprising a table or non-text rendering for reading or writing the contents of a memory register contained within said control system.

26. (Previously presented) The apparatus of Claim 25, wherein said request comprises a request for said Web page comprising a table or non-text rendering of data, and wherein said central processing unit is operative to identify said memory register, to determine the contents of said memory register, and to create said Web page comprising a table or non-text rendering corresponding to said contents of said memory register using said non-markup language Web site database.

27. (Previously presented) A method for providing information regarding the operation of a control system, comprising:

receiving non-markup language configuration data defining attributes of a Web site;
storing said configuration data as a non-markup language Web site database; and
in response to a request, dynamically generating a Web page defined by the non-markup language configuration data stored as a non-markup language Web site database that provides information regarding the operation of a control system.

28. (Previously presented) The method of Claim 27, further comprising transmitting said non-markup language Web site database to a Web server module associated with said control system, wherein said Web server module is operative to receive requests for said Web site and to generate markup language Web pages from said non-markup language Web site database in response to said requests.

29. (Original) The method of Claim 27, wherein said configuration data comprises data defining Web pages comprising a table or non-text rendering corresponding to the contents of read or write memory registers contained within said control system.

30. (Original) The method of Claim 29, wherein said data defining said table is created by receiving a mapping of a text tag to said memory register and by receiving a selection of said tags and a request that said tag be displayed in said table.

31. (Original) The method of Claim 29, wherein said data defining said non-text rendering is created by receiving a mapping of a tag to said memory register and a request that said tag be displayed via said non-text rendering.

32. (Canceled)

33. (Previously presented) The method of Claim 27, wherein said configuration data comprises an internet protocol address for said Web server module.

34. (Original) The method of Claim 27, wherein receiving non-markup language configuration data defining a Web site comprises receiving the selection of one or more of a plurality of defined Web pages.

35. (Previously presented) The method of Claim 27, wherein said plurality of defined Web pages comprises a security page, an alarm Web page, an event Web page, an Ethernet Web page, a serial port Web page, a menu Web page, a data access Web page, a page identifying online users, or a systems administrator page.

36. (Previously presented) A computer-readable medium comprising instructions which, when executed by a computer, cause the computer to perform the method of any one of Claims 27-31 and 33-35.

37. (Previously presented) A computer-controlled apparatus capable of performing the method of any one of Claims 27-31 and 33-35.

38. (Previously presented) A method for creating a web site for presenting information regarding the operation of a control system, the method comprising:
providing a Web server module configuration application interface;

receiving a non-markup language Web site design, wherein the non-markup language Web site design defines attributes of a Web site for presenting information regarding the operation of a control system that is to be provided by a Web server module;

storing the received non-markup language Web site design as a non-markup language Web site database; and

transmitting the non-markup language Web site database.

39. (Previously presented) The method of Claim 38, wherein the Web server module configuration application interface allows a user to design a Web site without using a markup language.

40. (Previously presented) The method of Claim 38, wherein the Web server module configuration application interface includes a module reference, a rack designator, a lost designator, and a host name.

41. (Previously presented) The method of Claim 38, wherein the Web server module configuration application interface allows a user to add, delete, or modify Web pages of a Web site.

42. (Previously presented) The method of Claim 38, wherein the Web server module configuration application interface allows a user to create tables in a Web site.

43. (New) The system of Claim 1, wherein said Web server module configuration application is stored on said remote computer and is executed by a user.

44. (New) The system of Claim 1, wherein said control system comprises a programmable logic controller.

45. (New) A method for defining operational characteristics of a Web server module and for producing a non-markup language Web site design for said Web server module, comprising:

accessing a user interface of a Web server module configuration application, wherein the user interface and Web server module configuration application are stored and executed on a remote computer connected to said Web server module;

configuring a desired aspect of said Web server module through interaction with the user interface; and

interacting with the user interface to generate a non-markup language Web site design, wherein interaction includes:

defining a table stored in the Web server module and viewed to generate a markup language Web page; and

manipulating and storing in the Web server module non-markup language Web pages.

46. (New) The method of Claim 45, wherein the desired aspect of said Web server that is configured is selected from a group of desired aspects including: an Ethernet port, a serial port, an e-mail server port, a module reference, a rack designator, a slot designator, a host name, an e-mail server port IP address, an IP address, a subnet mask, and a gateway address.

47. (New) The method of Claim 45, wherein defining the table includes editing existing tables using a table list provided by said Web server configuration application.

48. (New) The method of Claim 45, wherein defining the table further includes creating new tables and specifying the tagged data items and columns of said tables using a tag list and a column list provided by said Web server configuration application.

49. (New) The method of Claim 45, wherein defining the table further includes creating new tags and editing existing tags using a tag definition screen provided by said Web server configuration application.